MAT 035, Quiz #6, Spring 2017 Name KEY

Instructions: Show all work. Use exact answers, unless specifically asked to round.

1. You have \$50,000 to invest, and two funds that you'd like to invest in. Your uncle tells you about a "sure thing" that promised to yield 14% interest. The bonds your mom recommends yields 6% interest. Because of college financial-aid implications, you don't think you can afford to earn more than \$4,500 in interest income this year. How much should you put in each fund?

   X = sure thing \$
   50,000 − x = bonds

   $.14x + .06(50{,}000 - x) = 4500$

   $.14x + 3000 - .06x = 4500$

   $.08x = 1500$

   $X = \$18{,}750$ in "surething"
   bonds $= \$31{,}250$

2. Solve $5x + 7 \leq 3(x + 4)$. Write the solution in interval notation.

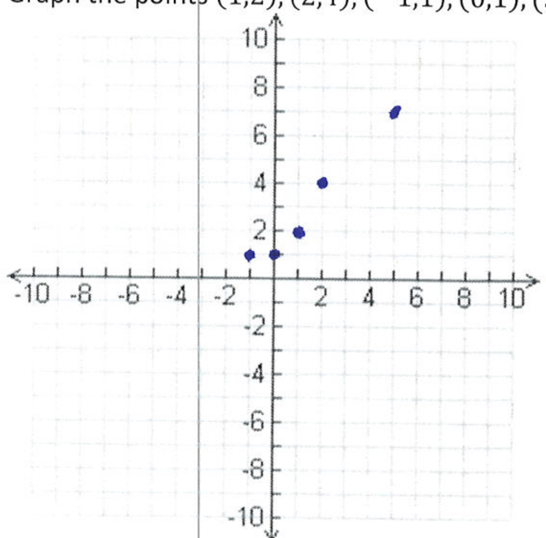
   $5x + 7 \leq 3x + 12$
   $-3x - 7 \quad -3x \quad -7$

   $\frac{2x}{2} \leq \frac{5}{2}$

   $x \leq \frac{5}{2}$

   $(-\infty, 5/2]$

3. Graph the points $(1,2), (2,4), (-1,1), (0,1), (5,7)$ on the graph below.



4. What is the name of the type of graph you just drew?

   Scatterplot